

## PATENT COOPERATION TREATY

27 MRT 2002

PCT

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

JORRITSMA, Ruurd  
Nederlandsch Octrooibureau  
Scheveningseweg 82  
P.O. Box 29720  
NL-2502 LS The Hague  
PAYS-BAS

Date of mailing (day/month/year)

19 February 2002 (19.02.02)

Applicant's or agent's file reference

BO 42834 AS

International application No.

PCT/NL00/00589

International filing date (day/month/year)

24 August 2000 (24.08.00)

## IMPORTANT NOTIFICATION

## 1. The following indications appeared on record concerning:

☒ the applicant ☒ the inventor ☐ the agent ☐ the common representative

Name and Address

ARNOLD, Derek, Weslie  
Jupiterstraat 26  
NL-8303 ZV Emmeloord  
Netherlands

State of Nationality

GB

State of Residence

NL

Telephone No.

Facsimile No.

Teleprinter No.

## 2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☒ the name ☐ the address ☐ the nationality ☐ the residence

Name and Address

ARNOLD, Derek, Leslie  
Jupiterstraat 26  
NL-8303 ZV Emmeloord  
Netherlands

State of Nationality

GB

State of Residence

NL

Telephone No.

Facsimile No.

Teleprinter No.

## 3. Further observations, if necessary:

Correction of a typographical error.

## 4. A copy of this notification has been sent to:

☒ the receiving Office ☐ the designated Offices concerned  
☐ the International Searching Authority ☒ the elected Offices concerned  
☐ the International Preliminary Examining Authority ☐ other:The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Kiwa MPAY *KMP*


Telephone No.: (41-22) 338.83.38

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>BO 42834 dVr</b>	<b>FOR FURTHER ACTION</b>		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. <b>PCT/NL00/00589</b>	International filing date (day/month/year) <b>24/08/2000</b>	Priority date (day/month/year) <b>24/08/1999</b>	
International Patent Classification (IPC) or national classification and IPC <b>A42B3/24</b>			
Applicant <b>DEREK'S PATENT B.V. et al.</b>			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 3 sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the report</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input checked="" type="checkbox"/> Certain defects in the international application</li> <li>VIII <input checked="" type="checkbox"/> Certain observations on the international application</li> </ul>			
Date of submission of the demand  <b>12/03/2001</b>		Date of completion of this report  <b>18.01.2002</b>	
Name and mailing address of the international preliminary examining authority:  <b>European Patent Office</b> <b>D-80298 Munich</b> <b>Tel. +49 89 2399 - 0 Tx: 523656 epmu d</b> <b>Fax: +49 89 2399 - 4465</b>		Authorized officer  <b>Pollet, D</b>  Telephone No. +49 89 2399 7516	



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**International application No. **PCT/NL00/00589****I. Basis of the report**

1. With regard to the elements of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*)  
**Description, pages:**

3-6	as originally filed	
2	with telefax of	09/10/2001
1	with telefax of	22/10/2001

**Claims, No.:**

1-10	with telefax of	22/10/2001
------	-----------------	------------

**Drawings, sheets:**

1/2,2/2	as originally filed
---------	---------------------

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**International application No. **PCT/NL00/00589**

4. The amendments have resulted in the cancellation of:

- ☐ the description,      pages:  
☐ the claims,      Nos.:  
☐ the drawings,      sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

## 1. Statement

Novelty (N)	Yes:	Claims 1-10
	No:	Claims
Inventive step (IS)	Yes:	Claims
	No:	Claims 1-10
Industrial applicability (IA)	Yes:	Claims 1-10
	No:	Claims

2. Citations and explanations  
**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. T/NL00/00589

Reference is made to the following documents:

- D1: WO-A-96 16563 (cited in the application)
- D2: US-A-3 012 248
- D3: US-A-3 718 937 (cited in the application)
- D4: DE-A- 36 35 703
- D5: EP-A-0 504 518 (cited in the application)

**Re Item V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. The subject-matter of claim 1 can not be considered as involving an inventive step in the sense of Article 33(3) PCT for the following reason:

Document D1, which is regarded as the closest prior art, describes a visor assembly (1) (see Figs. 1-2) comprising an outer shield (2) and an inner shield (6) spaced therefrom, which inner shield (6) is located within the periphery of the outer shield, wherein mechanical fixing means (8, 12) are arranged between the two shields for fixing the latter detachably with respect to one another, (said outer shield being provided with means (8) for fixing the latter with respect to one another), said outer shield being provided with means (4) for fixing to a further component, such as a helmet (3) or goggles frame (p. 5, l. 6). The subject-matter of claim 1 differs from what has been disclosed in document D1 in that a seal / spacer is stuck to the inner shield which is fitted against the outer shield.

The problem to be solved by the present invention may therefore be regarded as providing a visor assembly with an improved prevention of misting up which is replaceable.

However, using a replaceable inner shield with a seal in order to form a double glazing cannot be considered to involve an inventive step. As mentioned in document D1 (p. 1, l. 13) double glazed devices in anti-condensation visors are known in the art. Further, it is well known that these types of devices because of the air layer are better insulating (i.e., prevent misting up) than coatings.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. T/NL00/00589

Comparable to the double-glazed devices which are known for windows of buildings and houses, two types of double glazing are known: permanently fixed (see D4 and D5) and removably fixed with a seal in between (see D2 and D3 ('inner lens 56 may be cemented to the outer lens 50' cf. col. 3, l. 16-17)). Hence, it would be obvious for the person skilled in the art, namely when a removable anti-condensation device is to be achieved, to apply the features known from D2 or D3 with corresponding effect to the visor assembly according to document D1, thereby arriving at the visor assembly according to claim 1.

2. Dependent claims 2-10 do not appear to contain any features which, in combination with the features of any claim to which they refer, meet the requirements of Article 33(3) PCT. The features herein disclosed appear to be merely some of several constructional possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill. Hints thereto could easily be taken from the above mentioned documents all closely related to the field. For example:

re claim 2:

In the visor assembly according to D2 an air chamber is delimited between the inner shield and outer shield (col. 3, l. 38-39) and the internal width of said chamber is at least 2 mm (col. 3, l. 25-27).

re claim 3:

In the visor according to D1, the mechanical fixing means comprise pins (10) fitted on the outer shield which interact with recesses (12) made in the inner shield.

re claim 5:

In the visor assembly according to D5 the outer shield (6) is made of polycarbonate (col. 3, l. 17).

re claim 9:

The inner shield (7) in the visor assembly according to D5 is provided on one side with a coating that counteracts misting up (col. 3, l. 18-21).

**Re Item VII**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**International application No. **CT/NL00/00589****Certain defects in the international application**

According to the requirements of Rule 11.13(I) reference signs not appearing in the description shall not appear in the drawings, and vice versa. This requirement is not met in view of the reference sign 11 in Fig 2.

Patent publication numbers should be given instead of application numbers when referring to prior art documents (see p. 1 (indicated 6), l. 12; p. 2, l. 24 and p. 4, l. 31).

The last sentence on page 1 (indicated as page 6) is repeated on page 2.

**Re Item VIII****Certain observations on the international application**

In claim 1 it is stated that '...said outer shield being provided with means for fixing the latter with respect to one another...'. It is however unclear (cf. Article 6 PCT) whether this is an error and thereby a mere repetition of the wording preceding this feature (i.e. 'wherein mechanical fixing means are arranged between the two shields for fixing the latter with respect to one another') or indeed an extra feature of the visor assembly.

The embodiment of the invention described on page 4, l. 1-3 (i.e. **without the provision of a mutual seal**) does not fall within the scope of the claims. This inconsistency between the claims and the description leads to doubt concerning the matter for which protection is sought, thereby rendering the claims unclear (Article 6 PCT).

The vague and imprecise statement in the description on page 5, l. 32 implies that the subject-matter for which protection is sought may be different to that defined by the claims, thereby resulting in lack of clarity (Article 6 PCT) when used to interpret them (see also the PCT Guidelines, III-4.3a).

Visor assembly

(41)

The present invention relates to a visor assembly according to the preamble of claim

1.

5 DE 3 244 152 A1 describes a safety visor assembly consisting of an outer shield and an inner shield. The inner shield is hingeably attached to a helmet construction. These shields are held apart by a rubber ring, which is fitted in a seat in one of the shields. The parts are then fixed to one another with the aid of a moulding material. The space between inner shield and outer shield can optionally be filled with a plastic composition in order to  
10 increase the strength thereof. Strength is of primary importance for such helmets.

A mechanical construction for holding an inner shield and an outer shield apart according to the preamble of claim 1 is disclosed in PCT Application 9616563 in the name of Derk's Patent B.V. With this structure the outer shield is provided with means for fixing to a helmet or the like. The aim of such a structure is to prevent the visor misting up. With  
15 this structure the distance between inner shield and outer shield is guaranteed only in a single location and in principle air containing moisture, water and dirt is able freely to move between inner shield and outer shield. Consequently it is not possible to prevent misting up of the inner shield in an optimum manner under all conditions.

However, if the structure according to DE 3 244 152 A1 were to be used, there would  
20 be the disadvantage that both the inner shield and the outer shield would have to be removed in the event of damage.

Such structures with permanent fixing between inner shield and outer shield are also disclosed in US 3 718 937 and EP 0 504 518 A.

US 3 012 248 discloses a visor assembly, comprising an inner shield and an  
25 outer shield spaced therefrom, wherein the sealing spacer is fixed to the outer shield.

The aim of the present invention is to avoid the disadvantages associated with the prior art. That is to say, the aim is to provide a chamber between inner shield and outer shield that can be filled with air or a gas and as far as possible is sealed with respect to the environment. Moreover, the width of such a chamber, that is to say the internal spacing  
30 between inner shield and outer shield, must be optimised in order as far as possible to prevent misting up. Furthermore, it must be simple to replace the various components independently of one another. The shapes of the shields must also follow one another as far as possible, that is to say the shields must lie against one another in the correct manner.



as possible, that is to say the shields must lie against one another in the correct manner.

These aims are achieved with a visor assembly described above having the characterizing features of claim 1.

According to the invention a visor assembly is understood to comprise any possible application. One important application is that in combination with helmets or other headwear. A further application is that of goggles-like constructions. However, windows in vehicles and instrument covers exposed to the open air, and the like, can also make use of the technology according to the invention. A particular application of the invention lies in helmets, goggles and the like which are used at low temperature. In snowmobiles, for example, there is the problem that moisture exhaled by the driver and/or passengers deposits as ice on the visor as a result of direct heat transfer with the environment. Surprisingly, it has been found that this problem no longer exists with the construction according to the invention.

As can be seen from the above, the spacer is stuck to the inner shield only. Fixing of the inner shield to the outer shield takes place with the aid of mechanical means. Consequently it is possible to release the connection between the inner shield and the outer shield at any desired point in time. This can be the case if, for example, the outer shield has been damaged. Moreover, this can be necessary if the inside of the outer shield or the outside of the inner shield becomes damp or soiled for any reason whatsoever.

According to an advantageous embodiment of the invention, the mechanical fixing means comprise pins fitted on the outer shield which interact with recesses made in the inner shield. Such mechanical fixing means are known in the state of the art for use of a visor assembly with which the inner shield and outer shield are positioned against one another. Such a construction is described in European Patent Application 95937212.9 in the name of Derk's Patent B.V.

In the case of the present invention there is a gap between the inner shield and outer shield.

The pins and recesses interacting therewith, which have been described above, can be further developed depending on the application. For instance, the pins can comprise eccentric pins, as a result of which a closer fit to the position of the recesses can be

Claims

(41)

1. Visor assembly (1, 21) comprising an outer shield (2, 22) and an inner shield (6, 26) spaced therefrom, which inner shield is located within the periphery of the outer shield, wherein mechanical fixing means (8, 24, 25) are arranged between the two shields for fixing the latter with respect to one another, said outer shield being provided with means for fixing the latter with respect to one another, said outer shield being provided with means for fixing to a further component, such as a helmet or goggles frame, wherein a seal/spacer (7; 27) extending around the periphery of said inner shield is fitted between the outer shield and inner shield, characterised in that, said seal/spacer (7, 27) is stuck to the inner shield and is fitted detachably against said outer shield.

2. Visor assembly according to Claim 1, wherein a gas/air chamber is delimited between the inner shield and outer shield and wherein the internal width of said chamber is at least 2 mm.

3. Visor according to Claim 1, wherein said mechanical fixing means comprise pins (10) fitted on the outer shield which interact with recesses (12) made in the inner shield.

4. Visor assembly according to one of the preceding claims, wherein said seal/spacer is made of silicone material.

5. Visor assembly according to one of the preceding claims, wherein said outer shield is made of polycarbonate.

6. Visor assembly according to one of the preceding claims, wherein said inner shield is made of heat-treated cellulose acetate material.

7. Visor assembly according to one of the preceding claims, wherein said mechanical fixing means comprise a seat (23) in said outer shield (22) which at least partially corresponds to the shape of said inner shield (26).

8. Visor assembly according to one of the preceding claims, wherein said inner shield is made of cellulose propionate material.

9. Visor assembly according to Claim 8, wherein said inner shield is provided on one side with a coating that counteracts misting up.

10. Visor assembly according to Claim 8 or 9, wherein said inner shield is provided on one side with a coating which improves scratch resistance.

## PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

To:

JORRITSMA, Ruurd  
Nederlandsch Octrooibureau  
Scheveningseweg 82  
P.O. Box 29720  
NL-2502 LS The Hague  
PAYS-BAS

Date of mailing (day/month/year) 19 February 2002 (19.02.02)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference BO 42834 AS	
International application No. PCT/NL00/00589	International filing date (day/month/year) 24 August 2000 (24.08.00)

1. The following indications appeared on record concerning:		
<input checked="" type="checkbox"/> the applicant	<input checked="" type="checkbox"/> the inventor	<input type="checkbox"/> the agent <input type="checkbox"/> the common representative
Name and Address ARNOLD, Derek, Weslie Jupiterstraat 26 NL-8303 ZV Emmeloord Netherlands	State of Nationality GB	State of Residence NL
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:		
<input type="checkbox"/> the person	<input checked="" type="checkbox"/> the name	<input type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence
Name and Address ARNOLD, Derek, Leslie Jupiterstraat 26 NL-8303 ZV Emmeloord Netherlands	State of Nationality GB	State of Residence NL
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	
3. Further observations, if necessary: <b>Correction of a typographical error.</b>		
4. A copy of this notification has been sent to:		
<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned	
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned	
<input type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:	

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer  Kiwa MPAY
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room  
 CP2/5C24  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE  
 in its capacity as elected Office

<b>Date of mailing (day/month/year)</b> 04 May 2001 (04.05.01)	
<b>International application No.</b> PCT/NL00/00589	<b>Applicant's or agent's file reference</b> BO 42834 AS
<b>International filing date (day/month/year)</b> 24 August 2000 (24.08.00)	<b>Priority date (day/month/year)</b> 24 August 1999 (24.08.99)
<b>Applicant</b> ARNOLD, Derek, Weslie	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
 12 March 2001 (12.03.01)

☐ in a notice effecting later election filed with the International Bureau on:  
 \_\_\_\_\_

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Olivia TEFY Telephone No.: (41-22) 338.83.38
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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference BO 42834 dVr	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/NL00/00589	International filing date (day/month/year) 24/08/2000	Priority date (day/month/year) 24/08/1999
International Patent Classification (IPC) or national classification and IPC A42B3/24		
Applicant DEREK'S PATENT B.V. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.  
  
☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  12/03/2001	Date of completion of this report  18.01.2002
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Pollet, D  Telephone No. +49 89 2399 7516 

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/NL00/00589

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

3-6	as originally filed	
2	with telefax of	09/10/2001
1	with telefax of	22/10/2001

**Claims, No.:**

1-10	with telefax of	22/10/2001
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**Drawings, sheets:**

1/2,2/2	as originally filed
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2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)):
- ☐ the language of publication of the international application (under Rule 48.3(b)).
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3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
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- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/NL00/00589

4. The amendments have resulted in the cancellation of:

- ☐ the description,          pages:
- ☐ the claims,                Nos.:
- ☐ the drawings,            sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes:	Claims	1-10
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-10
Industrial applicability (IA)	Yes:	Claims	1-10
	No:	Claims	

2. Citations and explanations  
**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

Reference is made to the following documents:

- D1: WO-A-96 16563 (cited in the application)
- D2: US-A-3 012 248
- D3: US-A-3 718 937 (cited in the application)
- D4: DE-A- 36 35 703
- D5: EP-A-0 504 518 (cited in the application)

**Re Item V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. The subject-matter of claim 1 can not be considered as involving an inventive step in the sense of Article 33(3) PCT for the following reason:

Document D1, which is regarded as the closest prior art, describes a visor assembly (1) (see Figs. 1-2) comprising an outer shield (2) and an inner shield (6) spaced therefrom, which inner shield (6) is located within the periphery of the outer shield, wherein mechanical fixing means (8, 12) are arranged between the two shields for fixing the latter detachably with respect to one another, (said outer shield being provided with means (8) for fixing the latter with respect to one another), said outer shield being provided with means (4) for fixing to a further component, such as a helmet (3) or goggles frame (p. 5, l. 6). The subject-matter of claim 1 differs from what has been disclosed in document D1 in that a seal / spacer is stuck to the inner shield which is fitted against the outer shield.

The problem to be solved by the present invention may therefore be regarded as providing a visor assembly with an improved prevention of misting up which is replaceable.

However, using a replaceable inner shield with a seal in order to form a double glazing cannot be considered to involve an inventive step. As mentioned in document D1 (p. 1, l. 13) double glazed devices in anti-condensation visors are known in the art. Further, it is well known that these types of devices because of the air layer are better insulating (i.e., prevent misting up) than coatings.



Comparable to the double-glazed devices which are known for windows of buildings and houses, two types of double glazing are known: permanently fixed (see D4 and D5) and removably fixed with a seal in between (see D2 and D3 ('inner lens 56 *may be* cemented to the outer lens 50' cf. col. 3, l. 16-17)). Hence, it would be obvious for the person skilled in the art, namely when a removable anti-condensation device is to be achieved, to apply the features known from D2 or D3 with corresponding effect to the visor assembly according to document D1, thereby arriving at the visor assembly according to claim 1.

2. Dependent claims 2-10 do not appear to contain any features which, in combination with the features of any claim to which they refer, meet the requirements of Article 33(3) PCT. The features herein disclosed appear to be merely some of several constructional possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill. Hints thereto could easily be taken from the above mentioned documents all closely related to the field. For example:

re claim 2:

In the visor assembly according to D2 an air chamber is delimited between the inner shield and outer shield (col. 3, l. 38-39) and the internal width of said chamber is at least 2 mm (col. 3, l. 25-27).

re claim 3:

In the visor according to D1, the mechanical fixing means comprise pins (10) fitted on the outer shield which interact with recesses (12) made in the inner shield.

re claim 5:

In the visor assembly according to D5 the outer shield (6) is made of polycarbonate (col. 3, l. 17).

re claim 9:

The inner shield (7) in the visor assembly according to D5 is provided on one side with a coating that counteracts misting up (col. 3, l. 18-21).

**Re Item VII**

### Certain defects in the international application

According to the requirements of Rule 11.13(I) reference signs not appearing in the description shall not appear in the drawings, and vice versa. This requirement is not met in view of the reference sign 11 in Fig 2.

Patent publication numbers should be given instead of application numbers when referring to prior art documents (see p. 1 (indicated 6), l. 12; p. 2, l. 24 and p. 4, l. 31).

The last sentence on page 1 (indicated as page 6) is repeated on page 2.

### Re Item VIII

#### Certain observations on the international application

In claim 1 it is stated that '...said outer shield being provided with means for fixing the latter with respect to one another...'. It is however unclear (cf. Article 6 PCT) whether this is an error and thereby a mere repetition of the wording preceding this feature (i.e. 'wherein mechanical fixing means are arranged between the two shields for fixing the latter with respect to one another') or indeed an extra feature of the visor assembly.

The embodiment of the invention described on page 4, l. 1-3 (i.e. **without the provision of a mutual seal**) does not fall within the scope of the claims. This inconsistency between the claims and the description leads to doubt concerning the matter for which protection is sought, thereby rendering the claims unclear (Article 6 PCT).

The vague and imprecise statement in the description on page 5, l. 32 implies that the subject-matter for which protection is sought may be different to that defined by the claims, thereby resulting in lack of clarity (Article 6 PCT) when used to interpret them (see also the PCT Guidelines, III-4.3a).

22. 10. 2001

Visor assembly

(41)

The present invention relates to a visor assembly according to the preamble of claim 1.

5 DE 3 244 152 A1 describes a safety visor assembly consisting of an outer shield and an inner shield. The inner shield is hingeably attached to a helmet construction. These shields are held apart by a rubber ring, which is fitted in a seat in one of the shields. The parts are then fixed to one another with the aid of a moulding material. The space between inner shield and outer shield can optionally be filled with a plastic composition in order to  
10 increase the strength thereof. Strength is of primary importance for such helmets.

A mechanical construction for holding an inner shield and an outer shield apart according to the preamble of claim 1 is disclosed in PCT Application 9616563 in the name of Derk's Patent B.V. With this structure the outer shield is provided with means for fixing to a helmet or the like. The aim of such a structure is to prevent the visor misting up. With  
15 this structure the distance between inner shield and outer shield is guaranteed only in a single location and in principle air containing moisture, water and dirt is able freely to move between inner shield and outer shield. Consequently it is not possible to prevent misting up of the inner shield in an optimum manner under all conditions.

However, if the structure according to DE 3 244 152 A1 were to be used, there would  
20 be the disadvantage that both the inner shield and the outer shield would have to be removed in the event of damage.

Such structures with permanent fixing between inner shield and outer shield are also disclosed in US 3 718 937 and EP 0 504 518 A.

**US 3 012 248 discloses a visor assembly, comprising an inner shield and an  
25 outer shield spaced therefrom, wherein the sealing spacer is fixed to the outer shield.**

The aim of the present invention is to avoid the disadvantages associated with the prior art. That is to say, the aim is to provide a chamber between inner shield and outer shield that can be filled with air or a gas and as far as possible is sealed with respect to the environment. Moreover, the width of such a chamber, that is to say the internal spacing  
30 between inner shield and outer shield, must be optimised in order as far as possible to prevent misting up. Furthermore, it must be simple to replace the various components independently of one another. The shapes of the shields must also follow one another as far as possible, that is to say the shields must lie against one another in the correct manner.

as possible, that is to say the shields must lie against one another in the correct manner.

These aims are achieved with a visor assembly described above having the characterizing features of claim 1.

According to the invention a visor assembly is understood to comprise any possible application. One important application is that in combination with helmets or other headwear. A further application is that of goggles-like constructions. However, windows in vehicles and instrument covers exposed to the open air, and the like, can also make use of the technology according to the invention. A particular application of the invention lies in helmets, goggles and the like which are used at low temperature. In snowmobiles, for example, there is the problem that moisture exhaled by the driver and/or passengers deposits as ice on the visor as a result of direct heat transfer with the environment. Surprisingly, it has been found that this problem no longer exists with the construction according to the invention.

As can be seen from the above, the spacer is stuck to the inner shield only. Fixing of the inner shield to the outer shield takes place with the aid of mechanical means. Consequently it is possible to release the connection between the inner shield and the outer shield at any desired point in time. This can be the case if, for example, the outer shield has been damaged. Moreover, this can be necessary if the inside of the outer shield or the outside of the inner shield becomes damp or soiled for any reason whatsoever.

According to an advantageous embodiment of the invention, the mechanical fixing means comprise pins fitted on the outer shield which interact with recesses made in the inner shield. Such mechanical fixing means are known in the state of the art for use of a visor assembly with which the inner shield and outer shield are positioned against one another. Such a construction is described in European Patent Application 95937212.9 in the name of Derk's Patent B.V.

In the case of the present invention there is a gap between the inner shield and outer shield.

The pins and recesses interacting therewith, which have been described above, can be further developed depending on the application. For instance, the pins can comprise eccentric pins, as a result of which a closer fit to the position of the recesses can be

Claims

(41)

1. Visor assembly (1, 21) comprising an outer shield (2, 22) and an inner shield (6, 26) spaced therefrom, which inner shield is located within the periphery of the outer shield, wherein mechanical fixing means (8, 24, 25) are arranged between the two shields for fixing the latter with respect to one another, said outer shield being provided with means for fixing the latter with respect to one another, said outer shield being provided with means for fixing to a further component, such as a helmet or goggles frame, wherein a seal/spacer (7; 27) extending around the periphery of said inner shield is fitted between the outer shield and inner shield, characterised in that, said seal/spacer (7, 27) is stuck to the inner shield and is fitted detachably against said outer shield.

2. Visor assembly according to Claim 1, wherein a gas/air chamber is delimited between the inner shield and outer shield and wherein the internal width of said chamber is at least 2 mm.

3. Visor according to Claim 1, wherein said mechanical fixing means comprise pins (10) fitted on the outer shield which interact with recesses (12) made in the inner shield.

4. Visor assembly according to one of the preceding claims, wherein said seal/spacer is made of silicone material.

5. Visor assembly according to one of the preceding claims, wherein said outer shield is made of polycarbonate.

6. Visor assembly according to one of the preceding claims, wherein said inner shield is made of heat-treated cellulose acetate material.

7. Visor assembly according to one of the preceding claims, wherein said mechanical fixing means comprise a seat (23) in said outer shield (22) which at least partially corresponds to the shape of said inner shield (26).

8. Visor assembly according to one of the preceding claims, wherein said inner shield is made of cellulose propionate material.

9. Visor assembly according to Claim 8, wherein said inner shield is provided on one side with a coating that counteracts misting up.

10. Visor assembly according to Claim 8 or 9, wherein said inner shield is provided on one side with a coating which improves scratch resistance.

1. 09. 00

PCT

## REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only	
PCT/NL	00/00589
International Application No.	
24 AUG. 2000	(24.08.00)
International Filing Date	
BUREAU VOOR DE INDUSTRIËLE EIGENDOM PCT INTERNATIONAL APPLICATION Name of receiving Office and "PCT International Application"	
Applicant's or agent's file reference (if desired) (12 characters maximum) BO 42834 AS	

<b>Box No. I TITLE OF INVENTION</b>	
Visor assembly	
<b>Box No. II APPLICANT</b>	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)	
Derek's Patent B.V. P.O. Box 412 NL-8300 AK EMMELOORD The Netherlands	
<input type="checkbox"/> This person is also inventor.	
Telephone No.	
Facsimile No.	
Teleprinter No.	
State (that is, country) of nationality: The Netherlands (NL)	
State (that is, country) of residence: The Netherlands (NL)	
This person is applicant for the purposes of: <input type="checkbox"/> all designated States <input checked="" type="checkbox"/> all designated States except the United States of America <input type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box	
<b>Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)</b>	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)	
ARNOLD, Derek Weslie Jupiterstraat 26 NL-8303 ZV EMMELOORD The Netherlands	
This person is: <input type="checkbox"/> applicant only <input checked="" type="checkbox"/> applicant and inventor <input type="checkbox"/> inventor only (If this check-box is marked, do not fill in below.)	
State (that is, country) of nationality: United Kingdom (UK)	
State (that is, country) of residence: The Netherlands (NL)	
This person is applicant for the purposes of: <input type="checkbox"/> all designated States <input type="checkbox"/> all designated States except the United States of America <input checked="" type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box	
<input type="checkbox"/> Further applicants and/or (further) inventors are indicated on a continuation sheet.	
<b>Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE</b>	
The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as: <input checked="" type="checkbox"/> agent <input type="checkbox"/> common representative	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)	
JORRITSMA, Ruurd et al Nederlandsch Octrooibureau Scheveningseweg 82, P.O. Box 29720 NL-2502 LS THE HAGUE THE NETHERLANDS	
Telephone No. 70 3527500	
Facsimile No. 70 3527528	
Teleprinter No.	
<input type="checkbox"/> Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.	

## Box No.V DESIGNATION OF STATES

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):

## Regional Patent

- ☐ **AP** ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, MZ Mozambique, SD Sudan, SL Sierra Leone, SZ Swaziland, TZ United Republic of Tanzania, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☐ **EA** Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☐ **EP** European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☐ **OA** OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line)

## National Patent (if other kind of protection or treatment desired, specify on dotted line):

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|--|--|
| <input type="checkbox"/> <b>AE</b> United Arab Emirates                  | <input type="checkbox"/> <b>LC</b> Saint Lucia                               |
| <input type="checkbox"/> <b>AG</b> Antigua and Barbuda                   | <input type="checkbox"/> <b>LK</b> Sri Lanka                                 |
| <input type="checkbox"/> <b>AL</b> Albania                               | <input type="checkbox"/> <b>LR</b> Liberia                                   |
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| <input type="checkbox"/> <b>BG</b> Bulgaria                              | <input type="checkbox"/> <b>MG</b> Madagascar                                |
| <input type="checkbox"/> <b>BR</b> Brazil                                | <input type="checkbox"/> <b>MK</b> The former Yugoslav Republic of Macedonia |
| <input type="checkbox"/> <b>BY</b> Belarus                               | <input type="checkbox"/> <b>MN</b> Mongolia                                  |
| <input type="checkbox"/> <b>BZ</b> Belize                                | <input type="checkbox"/> <b>MW</b> Malawi                                    |
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| <input type="checkbox"/> <b>DM</b> Dominica                              | <input type="checkbox"/> <b>SD</b> Sudan                                     |
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| <input type="checkbox"/> <b>GB</b> United Kingdom                        | <input type="checkbox"/> <b>SL</b> Sierra Leone                              |
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| <input type="checkbox"/> <b>HU</b> Hungary                               | <input type="checkbox"/> <b>UA</b> Ukraine                                   |
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| <input type="checkbox"/> <b>IN</b> India                                 | <input type="checkbox"/> <b>UZ</b> Uzbekistan                                |
| <input type="checkbox"/> <b>IS</b> Iceland                               | <input type="checkbox"/> <b>VN</b> Viet Nam                                  |
| <input type="checkbox"/> <b>JP</b> Japan                                 | <input type="checkbox"/> <b>YU</b> Yugoslavia                                |
| <input type="checkbox"/> <b>KE</b> Kenya                                 | <input type="checkbox"/> <b>ZA</b> South Africa                              |
| <input type="checkbox"/> <b>KG</b> Kyrgyzstan                            | <input type="checkbox"/> <b>ZW</b> Zimbabwe                                  |
| <input type="checkbox"/> <b>KP</b> Democratic People's Republic of Korea |  |
| <input type="checkbox"/> <b>KR</b> Republic of Korea                     |  |
| <input type="checkbox"/> <b>KZ</b> Kazakhstan                            |  |

Check-box reserved for designating States which have become party to the PCT after issuance of this sheet:



**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation (including fees) must reach the receiving Office within the 15-month time limit.)

Box No. VI PRIORITY CLAIM		<input type="checkbox"/> Further priority claims are indicated in the Supplemental Box.		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: regional Office	international application: receiving Office
item (1) (24.08.99) 24 August 1999	1012896	the Netherlands		
item (2)				
item (3)				

☒ The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s): 1

\* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.

## Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):	Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):		
ISA / EPO	Date (day/month/year)	Number	Country (or regional Office)
	9 May 2000	SN 33669 NL	the Netherlands

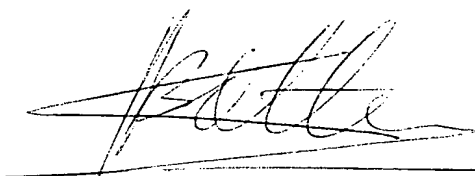
## Box No. VIII CHECK LIST; LANGUAGE OF FILING

This international application contains the following number of sheets:	This international application is accompanied by the item(s) marked below:
request : 3	1. <input checked="" type="checkbox"/> fee calculation sheet
description (excluding sequence listing part) : 6	2. <input type="checkbox"/> separate signed power of attorney
claims : 1	3. <input type="checkbox"/> copy of general power of attorney; reference number, if any:
abstract : 1	4. <input type="checkbox"/> statement explaining lack of signature
drawings : 2	5. <input type="checkbox"/> priority document(s) identified in Box No. VI as item(s):
sequence listing part of description :	6. <input type="checkbox"/> translation of international application into (language):
Total number of sheets : 13	7. <input type="checkbox"/> separate indications concerning deposited microorganism or other biological material
	8. <input type="checkbox"/> nucleotide and/or amino acid sequence listing in computer readable form
	9. <input checked="" type="checkbox"/> other (specify): Copy search report

Figure of the drawings which should accompany the abstract:	Language of filing of the international application: English
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## Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).



BOTTEMA, Hans J.

Nederlandsch Octrooibureau, The Hague, 24 August 2000

For receiving Office use only		2. Drawings: <input checked="" type="checkbox"/> received: <input type="checkbox"/> not received:
1. Date of actual receipt of the purported international application:	24 AUG 2000 (24.08.00)	
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:		
4. Date of timely receipt of the required corrections under PCT Article 11(2):		
5. International Searching Authority (if two or more are competent): ISA /	6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid.	

For International Bureau use only	
Date of receipt of the record copy by the International Bureau:	18 SEPTEMBER 2000 (18.09.00)



fig-1

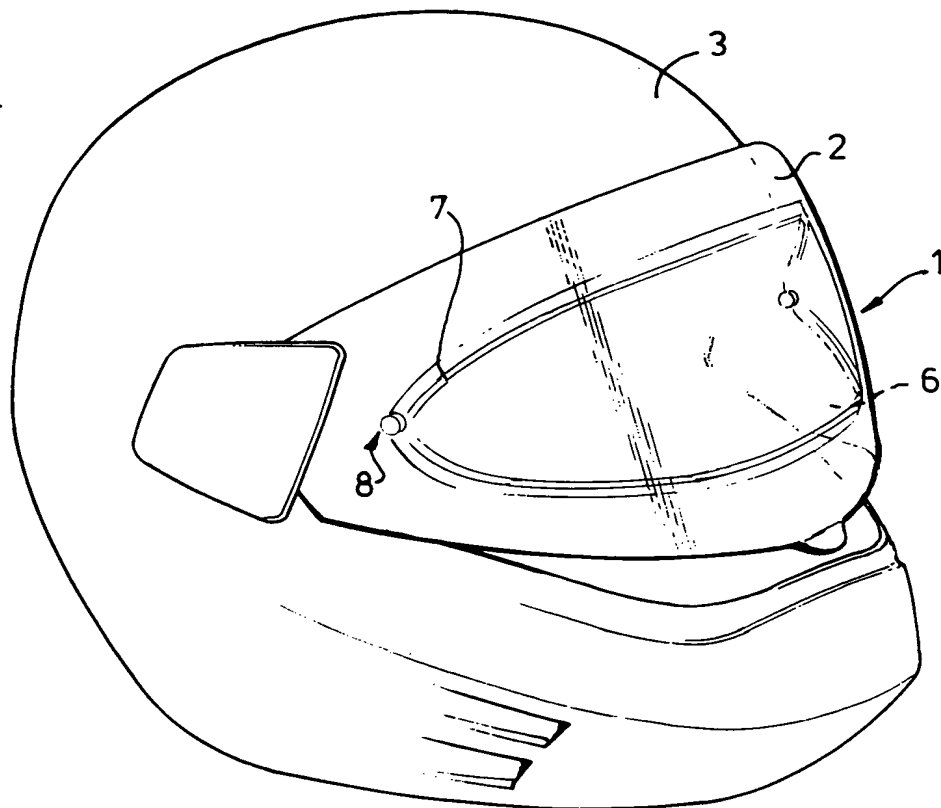
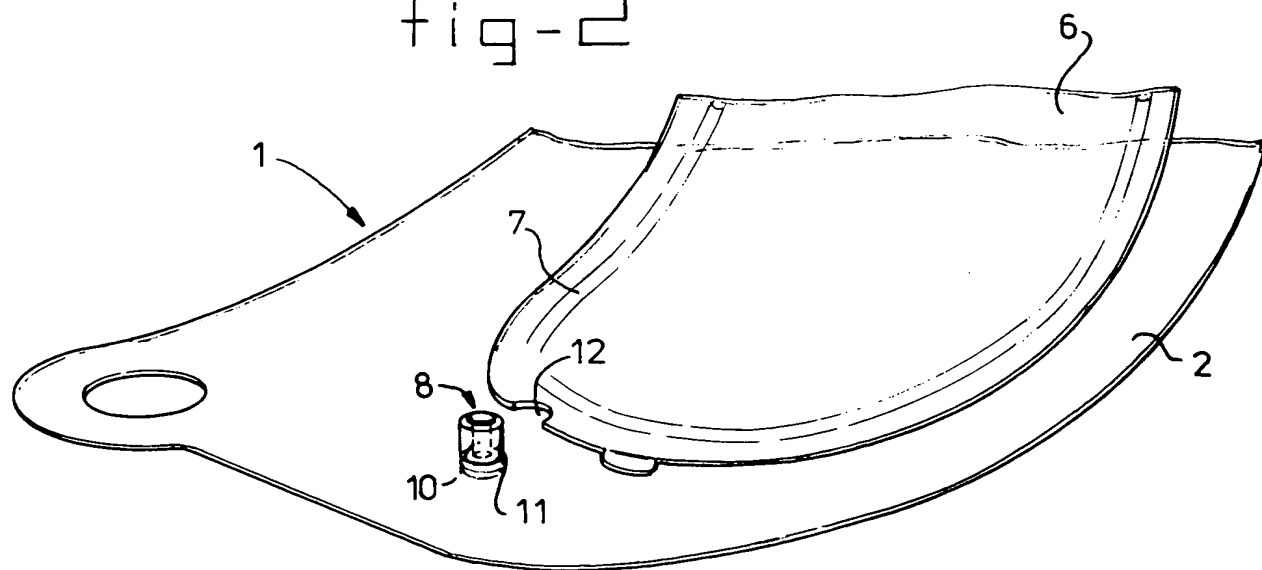


fig-2



2/2

fig-3

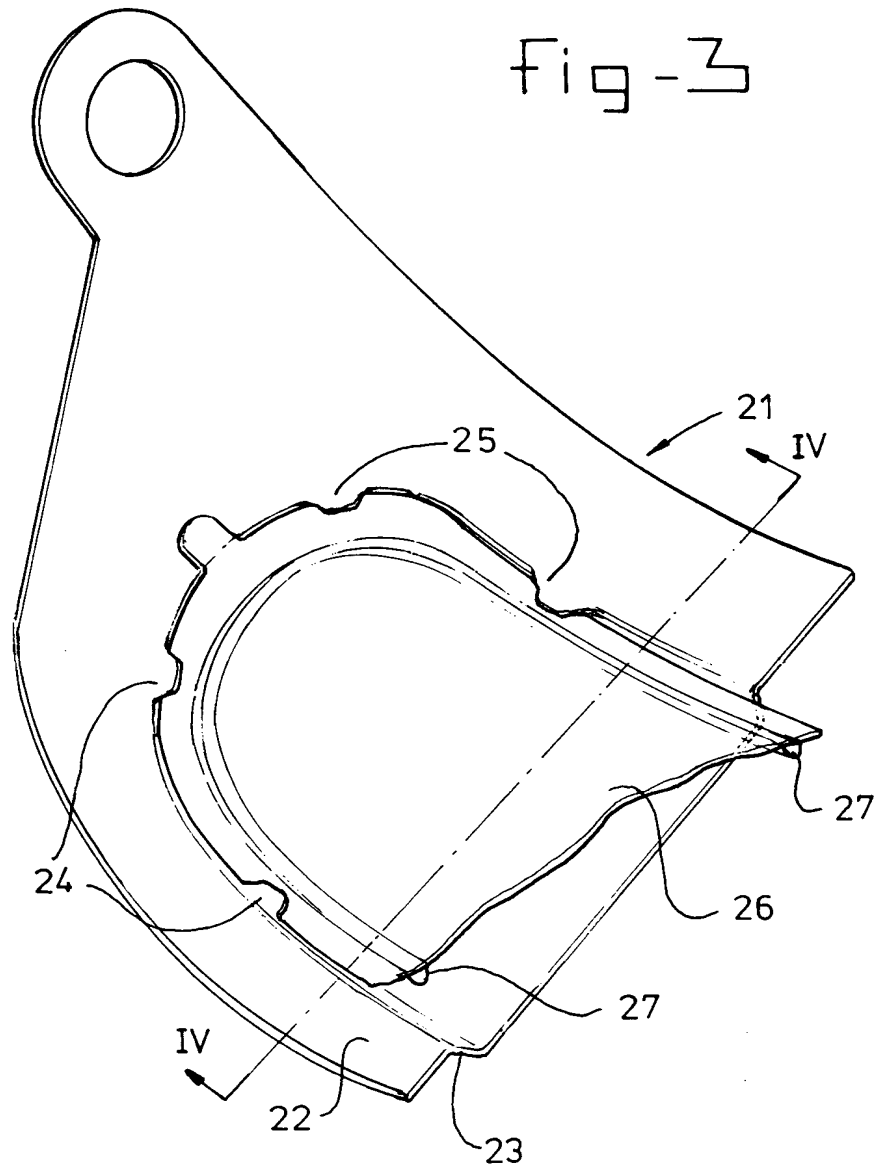
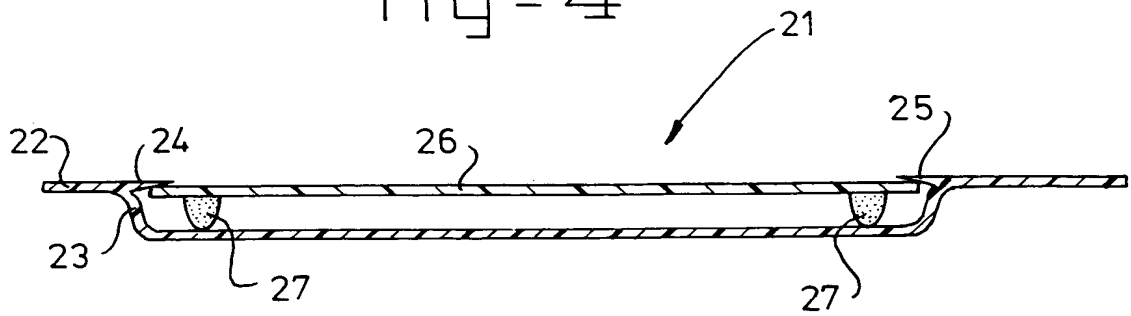


fig-4



Viziersamenstel.

De onderhavige uitvinding heeft betrekking op een viziersamenstel omvattende een buitenscherm en een op afstand daarvan aangebracht binnenscherm, dat binnen de  
5 begrenzing van het buitenscherm ligt, waarbij tussen het buitenscherm en binnenscherm een zich langs de omtrek van dat binnenscherm uitstrekkende afdichting/afstandhouder is aangebracht.

Een dergelijk samenstel is bekend uit het DE 3244152A1. Daarin wordt een uit  
een buitenscherm en een binnenscherm bestaand veiligheidsviziersamenstel  
10 beschreven. Het binnenscherm is scharnierend aan een helmconstructie bevestigd. Deze schermen worden op afstand van elkaar gehouden door een rubberring die in een opname van een van de schermen geplaatst wordt. Met behulp van een gietmassa worden de delen vervolgens aan elkaar bevestigd. Eventueel kan de tussenruimte tussen binnenscherm en buitenscherm gevuld worden met een kunststofmassa om de sterkte  
15 daarvan te vergroten. Sterkte is van primair belang voor dergelijke helmen.

Uit de PCT aanvraag 9616563 ten name van Derk's Patent B.V. is een mechanische constructie bekend voor het op afstand houden van een binnenscherm en een buitenscherm. Daarbij is het buitenscherm van middelen voorzien voor bevestiging aan een helm of dergelijke. Beoogd wordt met een dergelijke constructie beslaan van  
20 het vizier tegen te gaan. Daarbij wordt de afstand tussen binnenscherm en buitenscherm slechts op een enkele plaats gegarandeerd en kan lucht met vocht, water en vuil in principe vrijelijk tussen binnenscherm en buitenscherm bewegen. Daardoor kan niet onder alle omstandigheden op optimale wijze van het beslaan van het binnenscherm voorkomen worden.

25 Echter, zou indien de constructie volgens DE 3244152A1 toegepast zou worden, het nadeel bestaan dat bij beschadiging zowel het binnenscherm als buitenscherm verwijderd moeten worden.

Dergelijke constructies met permanente bevestiging tussen binnenscherm en buitenscherm zijn ook bekend uit US 3718937 en EP 0504518A.

30 Het is het doel van de onderhavige uitvinding de met de stand der techniek samenhangende nadelen te vermijden. Dat wil zeggen beoogd wordt in een kamer tussen binnen- en buitenscherm te voorzien die met lucht of een gas gevuld kan zijn en zoveel mogelijk afgedicht is ten opzichte van de omgeving. Bovendien dient de breedte

van een dergelijke kamer, dat wil zeggen de inwendige afstand tussen binnen- en buitenscherm geoptimaliseerd te zijn om beslaan zo veel mogelijk te voorkomen. Bovendien moet het eenvoudig mogelijk zijn, de verschillende componenten onafhankelijk van elkaar te wisselen. Tevens dienen de schermen de gedaanten van  
5 elkaar zo veel mogelijk te volgen dat wil zeggen op juiste wijze tegen elkaar aan te liggen.

Deze doeleinden worden bij een hierboven beschreven viziersamenstel verwezenlijkt doordat die afdichting/afstandhouder aan het binnenscherm gehecht is en los tegen dat buitenscherm is aangebracht, en dat tussen die twee schermen werkende mechanische  
10 bevestigingsmiddelen aangebracht zijn voor de onderlinge fixatie daarvan, waarbij dat buitenscherm voorzien is van middelen ter bevestiging aan een verder deel zoals een helm of brilframe.

Onder viziersamenstel wordt volgens de uitvinding elke voorstelbare toepassing begrepen. Een belangrijke toepassing is die in combinatie met helmen, of andere  
15 hoofddeksels. Een verdere toepassing is die van brilachtige constructies. Echter kunnen ook ramen in voertuigen en aan open lucht blootgestelde instrumentafdekkingen en dergelijke gebruikmaken van de techniek volgens de uitvinding. Een bijzondere toepassing van de uitvinding wordt gevormd bij helmen, brillen en dergelijke, die toegepast worden bij lage temperatuur. In snowmobiles bestaat bijvoorbeeld het  
20 probleem dat door de bestuurder en/of passagiers uitgeademd vocht door directe warmte overdracht met de omgeving zich als ijs op het vizier afzet. Verrassenderwijs is gebleken dat met de constructie volgens de uitvinding dit probleem niet langer bestaat.

Zoals uit het bovenstaande blijkt is de afstandhouder slechts aan het binnenscherm gehecht. Met behulp van mechanische middelen vindt bevestiging van  
25 het binnenscherm aan het buitenscherm plaats. Daardoor is het mogelijk op elk gewenst moment de verbinding tussen het binnenscherm en het buitenscherm te verbreken. Dit kan het geval zijn indien bijvoorbeeld het buitenscherm beschadigd is. Bovendien kan dit noodzakelijk zijn indien de binnenzijde van het buitenscherm of de buitenzijde van het binnenscherm om enigerlei reden vochtig of verontreinigt raakt.

30 Volgens een van voordeel zijnde uitvoering van de uitvinding omvatten de mechanische bevestigingsmiddelen op het buitenscherm aangebrachte pennen samenwerkend met op het binnenscherm aangebrachte uitsparingen. Dergelijke mechanische bevestigingsmiddelen zijn in de stand der techniek bekend voor het

gebruik van een viziersamenstel waarbij het binnenscherm en buitenscherm tegen elkaar aanliggend geplaatst worden. In Europese octrooiaanvraag 95937212.9 van Derks Patent B.V. wordt een dergelijke constructie beschreven.

Bij de onderhavige uitvinding bestaat afstand tussen het binnen- en buitenscherm.

5 De hierboven beschreven pennen en daarmee samenwerkende uitsparingen kunnen afhankelijk van de toepassing verder ontwikkeld worden. Zo kunnen de pennen excentrische pennen omvatten waardoor nauwkeurige aanpassing aan de positie van de uitsparingen verkregen kan worden. Bovendien moeten de uitsparingen in hulpstukken  
10 aangebracht zijn welke hulpstukken op hun beurt op het binnenscherm aangebracht zijn. Indien de hulpstukken een verende constructie omvatten kunnen eventueel toleranties verschillen tussen pennen en uitsparingen die hetzij bij productie hetzij tijdens gebruik ontstaan opgenomen worden.

Volgens een van voordeel zijnde uitvoering van de uitvinding is de afdichting/afstandhouder uit siliconenmateriaal vervaardigd. Dit werkt als een  
15 buigzame afdichting tussen het binnenscherm en buitenscherm. Bovendien wordt de drukbelasting tussen beide schermen regelmatig verdeeld. Bij voorkeur omvat het siliconenmateriaal droog, uitgehard en buigzaam siliconenmateriaal. Met een dergelijke constructie wordt zo veel mogelijk het binnentreden van vocht en dergelijke tussen de beide schermen voorkomen. Doordat de afstandhouder niet aan het buitenscherm  
20 gehecht is, is enige verplaatsing ten opzichte daarvan mogelijk. Dit is van belang indien het binnenscherm en buitenscherm uit verschillend materiaal bestaan. Een voorbeeld daarvan is indien het buitenscherm uit polycarbonaat bestaat en het binnenscherm uit celluloseacetaat bestaat. Met behulp van een rubberelastische afdichting kunnen uitzettingsverschillen probleemloos overwonnen worden. Bij toepassing van  
25 celluloseacetaat of andere kunststoffen kan het van belang zijn deze vooraf aan een warmtebehandeling te onderwerpen. Daardoor kunnen de mechanische eigenschappen verbeterd worden. Dit betreft het alle richtingen van het materiaal hebben van dezelfde eigenschappen en het beperken van de krimp bij het later onderwerpen aan hoge temperatuur. Celluloseacetaat kan daartoe bijvoorbeeld gedurende ongeveer twee uur  
30 aan warmtebehandeling bij ongeveer 25-80°C onderworpen worden.

Volgens een van voordeel zijnde uitvoering van de uitvinding is het binnenscherm vervaardigd uit cellulosepropionaat. Ten opzichte van celluloseacetaat is de lichttransmissie daarvan aanzienlijk beter. Dit binnenscherm kan verbeterde

hydrofiele eigenschappen verkrijgen door daarop een bekleding op basis van siliconen aan te brengen waarmee beslaan tegengegaan wordt. Het is mogelijk de andere zijde van een harde, krasvaste coating te voorzien. Door het verwijderbaar zijn van het binnenscherm ten opzichte van het buitenscherm is het mogelijk een dergelijk  
5 binnenscherm in twee posities toe te passen, een eerste, winterpositie, waarin het binnenscherm met de beslaan tegengaande bekleding naar het gezicht van de gebruiker gekeerd is en een tweede, zomerpositie, waarin het binnenscherm precies andersom aangebracht is. Vanzelfsprekend zal in een dergelijke uitvoering het binnenscherm aan twee zijden van een rand buigzaam materiaal zijn.

10 Begrepen moet worden dat gebruik van cellulosepropionaat zoals hierboven beschreven voor een binnenscherm niet beperkt is tot combinatie met de bevestigingstechniek aan een buitenscherm. Dat wil zeggen elke combinatie van een binnenscherm uit cellulose propionaatmateriaal met een buitenscherm op welke wijze dan ook aan elkaar bevestigd en aldan niet voorzien van een onderlinge afdichting, ligt  
15 binnen het bereik van de onderhavige uitvinding.

De afstand tussen het binnenscherm en buitenscherm kan naar wens ingesteld worden en is bij voorkeur groter dan 2 mm. en meer in het bijzonder ongeveer 3 mm. Behalve dat daardoor de isolatie tussen binnenscherm en buitenscherm geoptimaliseerd wordt, kan eveneens op deze wijze optimale afdichting tussen binnenscherm en  
20 buitenscherm verwezenlijkt worden. Begrepen zal worden dat afdichting tussen binnen- en buitenscherm aanzienlijk moeilijker is dan bij constructies waarbij een permanente afsluiting aanwezig is.

Volgens een verdere van voordeel zijnde uitvoering van de uitvinding is het buitenscherm van een uitsparing voorzien. De afmetingen van deze uitsparing komen  
25 ten minste overeen met de omtreksafmetingen van het binnenscherm. Het binnenscherm kan in een dergelijke uitsparing geplaatst worden. De mechanische bevestigingsmiddelen kunnen in dat geval een snaprand of dergelijke omvatten. Andere constructies voor het bevestigen van het binnenscherm in de opname zijn voor degene bekwaam in de stand der techniek eenvoudig voorstelbaar en liggen binnen het bereik  
30 van de onderhavige uitvinding.

De uitvinding zal hieronder nader aan de hand van in de tekening afgebeelde uitvoeringsvoorbeelden verduidelijkt worden. Daarbij toont:

Fig. 1 een helm voorzien van een eerste uitvoering van het viziersamenstel

volgens de uitvinding;

Fig. 2 in perspectivisch aanzicht een detail van het viziersamenstel volgens fig. 1;

Fig. 3 perspectivisch een tweede uitvoering van het viziersamenstel volgens de uitvinding; en

5 Fig. 4 een doorsnede volgens de lijn IV-IV in fig. 3.

In fig. 1 is het viziersamenstel volgens de uitvinding in het geheel met 1 aangegeven. Zichtbaar is een buitenvizier dat op niet nader afgebeelde wijze scharnierend met een helm 3 verbonden is. Zoals uit fig. 2 blijkt bestaat het viziersamenstel 1 behalve het buitenscherm 2 uit een binnenscherm 6. Binnenscherm 6  
10 is met behulp van uitsparingen 12 en pennen 10 die aangebracht zijn in het buitenscherm 2 en samen vasthoudmiddelen 8 vormen op te sluiten in het buitenscherm 2. Een dergelijke constructie wordt meer in het bijzonder beschreven in de Europese aanvraag 95937212.9.

Volgens de uitvinding is het binnenscherm 6 thans voorzien van een omtreksrand  
15 7 van siliconenmateriaal. Dit rupsmateriaal is gehecht aan het binnenscherm maar wordt pas na uitharden dat wil zeggen pas nadat het siliconenmateriaal 7 geen hechteigenschappen meer heeft aangebracht op buitenscherm 2. Door de aanwezigheid van deze rups 7 wordt het binnenscherm 6 op enige afstand van het buitenscherm 2 gehouden. Bovendien vindt volledige afdichting tussen binnenscherm 6 en  
20 buitenscherm 2 plaats.

Mocht om enigerlei reden het noodzakelijk zijn binnenscherm 6 en buitenscherm 2 van elkaar te verwijderen dan is dit op eenvoudige wijze mogelijk omdat geen blijvende hechtende verbinding met behulp van ring siliconenmateriaal 7 verwezenlijkt is.

25 In plaats van de getoonde bevestigingsmiddelen 8 kan elke andere in de stand der techniek bekende mechanische bevestigingsconstructies toegepast worden. In fig. 3 en 4 is een variant van het viziersamenstel volgens de uitvinding getoond en in het geheel met 21 aangegeven. Thans is niet aangegeven waarop dit vizier aangebracht is.

30 Zoals blijkt is in het buitenscherm 22 een verdieping of opname 23 aangebracht. De afmetingen daarvan komen overeen met de buitenafmetingen van het binnenscherm 26. Binnenscherm 26 is evenals bij de vorige uitvoering nabij de omtrek daarvan voorzien van een zich rondom uitstrekkende rand of ring 27. Deze bestaat uit een flexibel afdichtend materiaal. Bevestiging van binnenscherm 26 aan buitenscherm 22

vindt plaats met behulp van een eenvoudige snapconstructie. In het buitenscherf 22 zijn aan de bovenzijde en onderzijde insnaplippen 24 respectievelijk 25 aangebracht. Daardoor kan het binnenscherf 26 met enige voorspanning tegen het buitenscherf 22 gedrukt worden. Afstandhouder 27 voorziet in afdichting tussen binnen- en buitenscherf waardoor binnentreden van vocht en daardoor het beslaan van het buitenscherf 22 voorkomen kan worden.

Begrepen moet worden dat de constructie, waarbij het binnenscherf enigszins verzonken in het buitenscherf ligt, ook op andere wijze verwezenlijkt kan worden. Zo is het mogelijk het buitenscherf nabij de omtrek met aanzienlijke dikte, bijvoorbeeld 3 mm, uit te voeren. Door in deze dikte een verdieping van bijvoorbeeld van 1 mm aan te brengen kan daarin het binnenscherf opgenomen worden. Dat wil zeggen het buitenscherf heeft ter plaatse van het binnenscherf een geringere dikte. Daarbij is het mogelijk een zo gevormde uitsparing in het buitenscherf alzijdig te begrenzen door dikker materiaal van het buitenscherf. Het is echter ook mogelijk in een bepaalde richting de geringere dikte van het buitenscherf zich over de hele lengte daarvan te laten uitstrekken. In die richting kan het binnenscherf ten opzichte van het buitenscherf verplaatst worden en in positie gebracht worden.

Bij vergelijking van de bovenstaande uitvoeringsvoorbeelden zullen bij degene bekwaam in de stand der techniek dadelijk verdere uitvoeringsvarianten opkomen. Deze zijn voor de hand liggend naar bovenstaande beschrijving en liggen binnen het bereik van de bijgaande conclusies.



Conclusies

1. Viziersamenstel (1, 21) omvattende een buitenscherm (2, 22) en een op  
5 afstand daarvan aangebracht binnenscherm (6, 26) , dat binnen de begrenzing van het  
buitenscherm ligt, waarbij tussen het buitenscherm en binnenscherm een zich langs de  
omtrek van dat binnenscherm uitstrekkende afdichting/afstandhouder is aangebracht,  
met het kenmerk, dat die afdichting/afstandhouder (7, 27) aan het binnenscherm  
gehecht is en los tegen dat buitenscherm is aangebracht, en dat tussen die twee  
10 schermen werkende mechanische bevestigingsmiddelen (8, 24, 25) aangebracht zijn  
voor de onderlinge fixatie daarvan, waarbij dat buitenscherm voorzien is van middelen  
ter bevestiging aan een verder deel zoals een helm of brilframe.

2. Viziersamenstel volgens conclusie 1, waarbij tussen het binnenscherm en  
buitenscherm een gas/lucht kamer begrensd wordt en waarbij de inwendige breedte van  
15 die kamer ten minste 2 mm omvat.

3. Vizier volgens conclusie 1, waarbij die mechanische bevestigingsmiddelen op  
het buitenscherm aangebrachte pennen (10) samenwerkend met op het binnenscherm  
aangebrachte uitsparingen (12) omvatten.

4. Viziersamenstel volgens een van de voorgaande conclusies, waarbij die  
20 afdichting/afstandhouder siliconenmateriaal omvat.

5. Viziersamenstel volgens een van de voorgaande conclusies, waarbij dat  
buitenscherm polycarbonaat omvat.

6. Viziersamenstel volgens een van de voorgaande conclusies, waarbij dat  
binnenscherm warmte behandeld celluloseacetaatmateriaal omvat.

25 7. Viziersamenstel volgens een van de voorgaande conclusies, waarbij die  
mechanische bevestigingsmiddelen omvatten een opname (23) in dat buitenscherm (22)  
die ten minste gedeeltelijk overeenkomt met de vorm van dat binnenscherm (26).

8. Viziersamenstel volgens een van de voorgaande conclusies, waarbij dat  
binnenscherm cellulose propionaatmateriaal omvat.

30 9. Viziersamenstel volgens conclusie 8, waarbij dat binnenscherm aan een zijde  
van een beslaan tegengaande bekleding is voorzien.

10. Viziersamenstel volgens conclusies 8 of 9, waarbij dat binnenscherm aan een  
zijde van een krasbestendighheidsverhogende bekleding is voorzien.

Uittreksel

Viziersamenstel bestaande uit een buitenscherm en een binnenscherm. In gebruikstoestand liggen deze op afstand van elkaar. Daarbij ligt het binnenscherm  
5 binnen de omtreksbegrenzing van het buitenscherm. Het binnenscherm is van een zich nabij de omtrek daarvan uitstrekkende verhoging voorzien die als afstandshouder werkt ten opzichte van het buitenscherm. Deze verhoging bestaat bij voorkeur uit siliconenmateriaal dat wel gehecht is aan het binnenscherm maar niet aan het buitenscherm. Bevestiging aan het buitenscherm vindt plaats door mechanische  
10 bevestigingsmiddelen.

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>BO 42834 AS</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/NL 00/ 00589</b>	International filing date (day/month/year) <b>24/08/2000</b>	(Earliest) Priority Date (day/month/year) <b>24/08/1999</b>
Applicant  <b>DEREK'S PATENT B.V.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

**4. With regard to the title,**



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

**VISOR ASSEMBLY**

**5. With regard to the abstract,**



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

2, 4



None of the figures.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP00/00589

## Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

LINE 1 -...ASSEMBLY(1,21)...SHIELD(6,26)...OUTER SHIELD(2,22)  
LINE 2 -...INNER SHIELD(6,26)  
LINE 3 -...OUTER SHIELD(2,22)...INNER SHIELD(6,26)  
LINE 4 -...ELEVATION(7,27)  
LINE 5 -...ELEVATION(7,27)  
LINE 6 -...INNER SHIELD(6,26)...OUTER SHIELD(2,22)...OUTER SHIELD(2,22)  
LINE 7 -...MEANS(10,12)

# INTERNATIONAL SEARCH REPORT

International Application No.

PCT/NL 00/00589

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 A42B3/24

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A42B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

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- \*P\* document published prior to the international filing date but later than the priority date claimed

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- \*X\* document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- \* & \* document member of the same patent family

Date of the actual completion of the international search

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# INTERNATIONAL SEARCH REPORT

Intern. Patent Application No.

PCT/NL 00/00589

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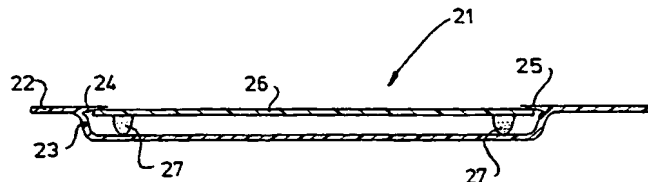
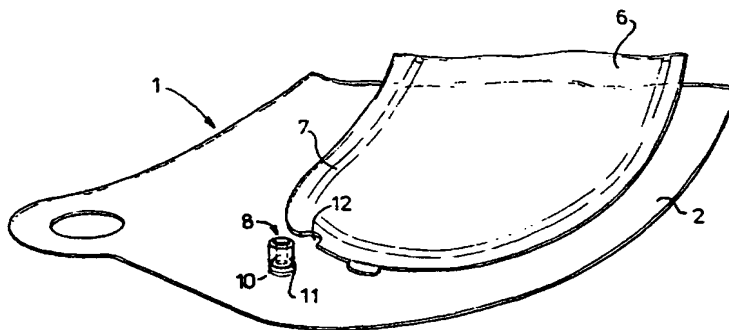
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- (71) Applicant (*for all designated States except US*):  
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[Continued on next page]

(54) Title: **VISOR ASSEMBLY**



(57) Abstract: Visor assembly (1, 21) consisting of an inner shield (6, 26) and an outer shield (2, 22). In the use position these shields are some distance apart. With this arrangement the inner shield (6, 26) is located within the peripheral confines of the outer shield (2, 22). The inner shield (6, 26) is provided with an elevation (7, 27) which extends close to the periphery thereof and which acts as a spacer with respect to the outer shield. This elevation (7, 27) is preferably made of silicone material which is stuck to the inner shield (6, 26) but is not stuck to the outer shield (2, 22). Fixing to the outer shield (2, 22) takes place by means (10, 12) of mechanical fixing means.

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- Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Claims

1. Visor assembly (1, 21) comprising an outer shield (2, 22) and an inner shield (6, 26) spaced therefrom, which inner shield is located within the periphery of the outer shield, a seal/spacer extending around the periphery of said inner shield being fitted between the outer shield and inner shield, characterised in that the seal/spacer (7, 27) is stuck to the inner shield and is fitted detachably against said outer shield and in that mechanical fixing means (8, 24, 25) are arranged between the two shields for fixing the latter with respect to one another, said outer shield being provided with means for fixing to a further component, such as a helmet or goggles frame.
2. Visor assembly according to Claim 1, wherein a gas/air chamber is delimited between the inner shield and outer shield and wherein the internal width of said chamber is at least 2 mm.
3. Visor according to Claim 1, wherein said mechanical fixing means comprise pins (10) fitted on the outer shield which interact with recesses (12) made in the inner shield.
4. Visor assembly according to one of the preceding claims, wherein said seal/spacer is made of silicone material.
5. Visor assembly according to one of the preceding claims, wherein said outer shield is made of polycarbonate.
6. Visor assembly according to one of the preceding claims, wherein said inner shield is made of heat-treated cellulose acetate material.
7. Visor assembly according to one of the preceding claims, wherein said mechanical fixing means comprise a seat (23) in said outer shield (22) which at least partially corresponds to the shape of said inner shield (26).
8. Visor assembly according to one of the preceding claims, wherein said inner shield is made of cellulose propionate material.
9. Visor assembly according to Claim 8, wherein said inner shield is provided on one side with a coating that counteracts misting up.
10. Visor assembly according to Claim 8 or 9, wherein said inner shield is provided on one side with a coating which improves scratch resistance.

fig-1

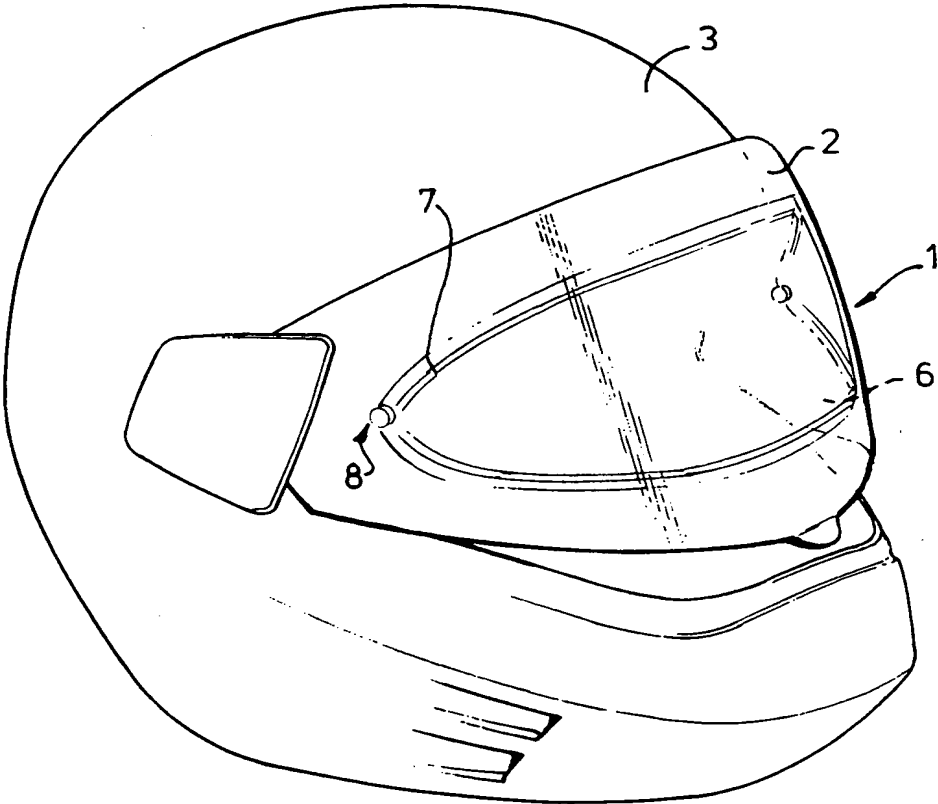
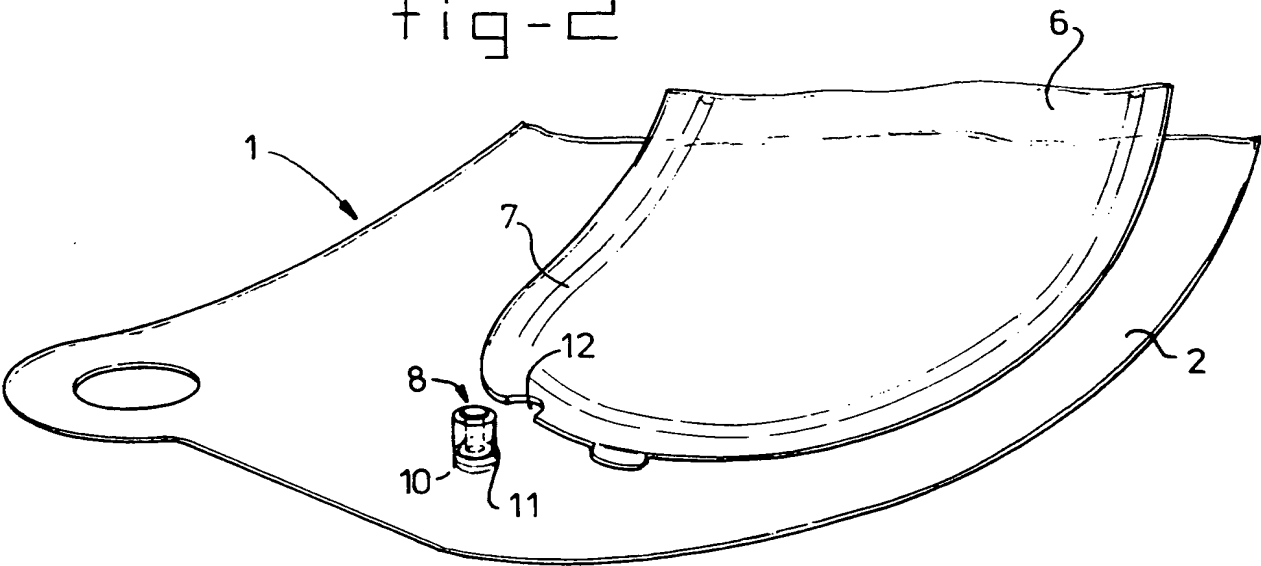


fig-2



2/2

fig-3

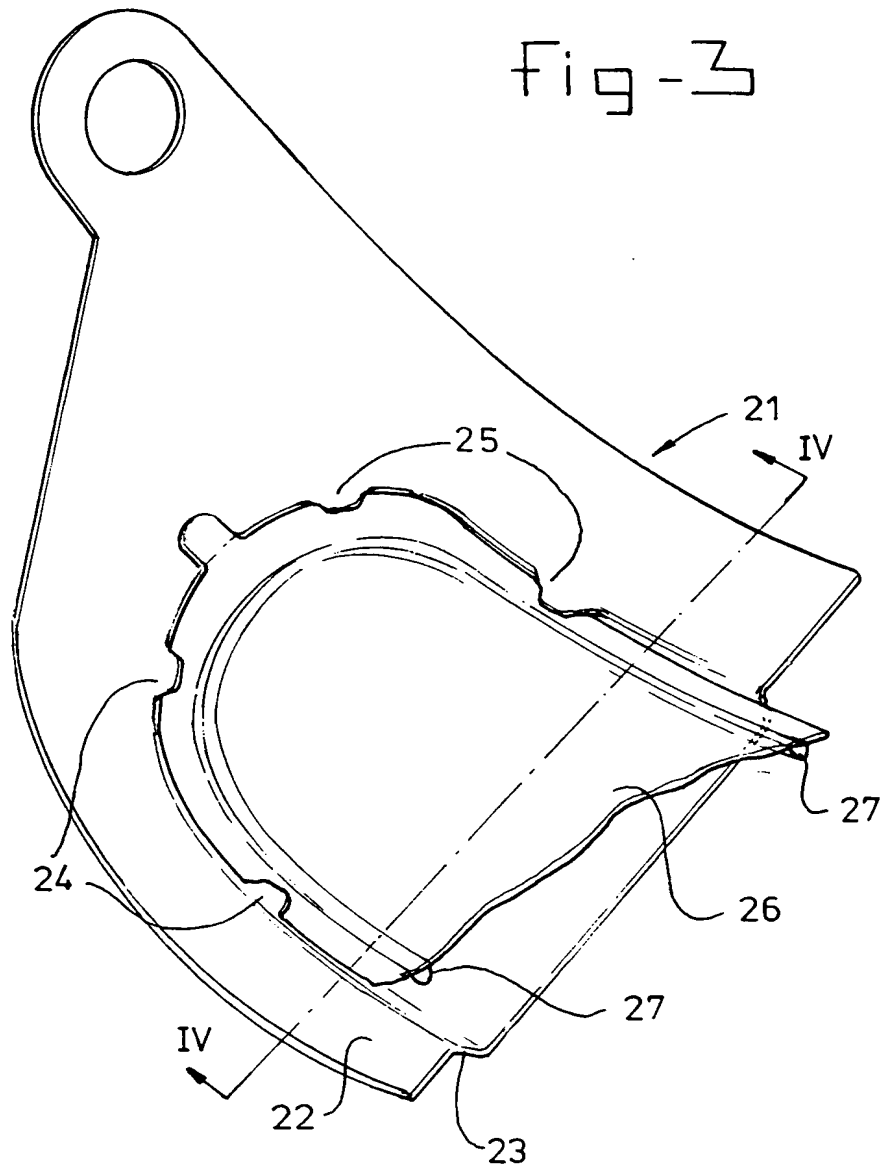


fig-4

